

REMARKS

The claims have been amended better to point out that which applicant regards as his invention and to overcome the rejection of one claim under the second paragraph of 35 USC 112.

Claims 1 and 12 have been amended to recite the feature of now-canceled claim 3, namely that the resin layer is a bonding layer capable of adhering to the injection-molded resin molding. Claims 4 and 5 have been amended so that they now depend from claim 1 and claim 6 has been revised to strike an unnecessary word, thus overcoming the rejection of that claim for formal grounds (a further minor self-evident change has been made to claim 6 also). A new claim 16 has been added depending from claim 12 and similar to original claim 2 specifying that the acrylic-modified polyolefin resin is one composed by graft copolymerizing at least an acrylic monomer and/or an acrylic prepolymer on principal chains in the polypropylene resin.

Applicant acknowledges the restriction requirement between article and method claims. The claims before the Examiner thus are claims 1, 2, and 4 to 16; it is noted that claims 14 and 15 stand withdrawn from consideration meaning that the Examiner has before her for assessment at this time claims 1, 2, 4 to 13, and 16.

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The rejection of claims 1 to 13 under 35 USC 103 as unpatentable over Brooks et al. '654 in view of Vesselin et al. '418 further in view of Enlow et al. '988 is respectfully traversed.

Applicant has found that using an acrylic-modified polyolefin resin as a bonding layer capable of adhering to an injection-molded molding permits bonding to a decorative sheet in the injection-molded molding, even in a hot state; see the discussion in the specification at page 3, lines 9 to 28. The discovery is an unexpected (and patentable) improvement over prior art techniques.

The Examiner cites Brooks et al. '654 to show a multilayered material having a polyolefin layer; the Examiner acknowledges that the polyolefin layer is not disclosed to be modified with at least an acrylic monomer and has cited Vesselin et al. '418 for this purpose. The Examiner then concludes that it would have been obvious to use such a polyolefin in the Brooks et al. '645 laminate because "such a modification enhances the mechanical strength, dimensional stability, and adhesive bonding of molded articles." Enlow et al. '699 is said to show that it is known in the art to use a decorative layer containing a pigment and an acrylic resin.

The deficiencies of Brooks et al. '654 are discussed above.

Vesselin et al. '418 describes various polyblend compositions containing at least one polyamide thermoplastic elastomer and at least one modified polyolefin useful in the formation of a variety of shaped articles. The reference contains no discussion or awareness of the advantages to be gained in injection molded molding, even in a hot state. In addition, Vesselin et al. '418 at column 3, lines 9 to 16 discloses that the modified polyolefins comprehend block copolymers. There is no indication, however, that the reference embraces the graft copolymers of instant claims 12 and 16. The other form of polymer discussed in Vesselin et al. '418 of the modified polyolefins are statistical or sequential copolymers of a branched or linear nature; see column 2, lines 51 and 52.

Moreover, the working and comparative examples found at pages 20 to 22 of the specification and the discussion and evaluation of those examples following at pages 22 to 26 establishes the advantages that can be achieved when practicing the claimed invention. The invention provides good adhesion both at ordinary temperature and immediately after molding (adhesion in a hot state) and good heat resistance for 100 hours at high temperatures (90°C,

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100°C, and 110°C). Such advantages are not taught or suggested by the cited references.

Reconsideration of the rejection is earnestly solicited.

The Examiner is asked to acknowledge on the record safe receipt of the certified copy of the priority document submitted in this case on July 9, 2001.

The Examiner is thanked for listing the references provided with two Information Disclosure Statements is filed concurrently herewith and is asked to consider both documents.

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If the only barrier to allowance is the presence of non-elected claims 14 and 15, the Examiner is authorized to cancel those claims for this express purpose.

Respectfully submitted,

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MARKUP

(Amended)

1. A decorative sheet for in-mold decorating injection molding, to be adhesively bonded to an injection-molded resin molding, said decorative sheet comprising:

a base sheet; and

a resin layer formed on a surface of the base sheet to be brought into contact with the injection-molded resin molding, and containing an acrylic-modified polyolefin resin.

Wherein said resin layer is a bonding layer

Capable of adhering to the injection-molded

Resin molding

(Amended)

4. The decorative sheet for in-mold decorating injection molding according to claim 3, wherein
a decorative layer is sandwiched between the base sheet and the bonding layer.

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(Amend)

5. The decorative sheet for in-mold decorating injection molding according to claim [3], wherein
a decorative layer is formed on a surface of the base sheet
not coated with the bonding layer.

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(Twice Amend)

6. The decorative sheet for in-mold decorating injection molding according to claim 4 ~~40000~~, wherein
the decorative layer contains a binder resin, and at least
either an acrylic resin ~~contained~~ or a polyvinyl chloride-acetate
resin, or both the acrylic resin and the polyvinyl chloride-
acetate ~~in~~ the binder resin.

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(Amended)

12. A decorative molding comprising:

a decorative sheet for in-mold decorating injection molding including a base sheet, and a resin layer formed on a surface of the base sheet containing an acrylic-modified polyolefin resin; and

an injection-molded resin molding to which the resin layer containing an acrylic-modified polyolefin resin is bonded.

Wherein said resin layer is a bonding layer
Capable of adhering to the injection-molded
resin molding

injection-molded resin molding
resin layer - acrylic-modified polyolefin resin
VSE - acrylic
acryl monomer / graft
acryl copolymer (+) polypropylene
resin chains